CLAIMS

The following listing of claims replaces all prior versions and listings of claims in the above-referenced application:

1. (Previously presented) A rate adaptive system for optical communication networks comprising:

a plurality of optical transceivers capable of transmitting and receiving optical signals at a plurality of rates to each other, and

an optical fibre linked to said optical transceivers, said system configured to cause said optical transceivers to transmit and receive optical signals at an initial rate and to adapt said initial rate based upon an error condition responsive to an optical signal parameter by causing said optical transceivers to transmit and receive at a different rate, wherein a rate of data being forwarded per unit time is adjusted by inserting invalid data which can be identified and ignored by a downstream process.

2. (Previously presented) The system of claim 1, wherein said error condition is a failure to synchronize a received signal.

3. (Previously presented) The system of claim 1, wherein said system is further configured to calculate an error coefficient based on said received signals, and said error condition comprise said error coefficient exceeding a predefined range.

4. (Previously presented) The system of claim 1, wherein said initial rate is lowered according to predefined percentages of said initial rate in response to said error condition.

5. (Previously presented) The system of claim 4, wherein said percentages are selected from the group of 75, 50 and or 25 percent of said initial rate.

1   6.   (Previously presented)   The system of claim 1, wherein said initial
2 rate is 10 Gb/s.

1   7.   (Previously presented)   The system of claim 1, wherein said system
2 is configured to operate in an optical Ethernet network.

1   8.   (Previously presented)   The system of claim 1, wherein said system
2 is further configured to notify a network operator in the event of said error condition.

1   9.   (Previously presented)   A rate adaptive method for operating an
2 optical communication network, comprising:
3   transmitting data at an initial rate,
4   receiving said data at said initial rate,
5   evaluating said data responsive to a parameter observed on an optical signal to
6 determine if an error condition exists, and
7   adapting said rate based upon said evaluation by transmitting and receiving at
8 a different rate, wherein transmitting and receiving comprises inserting invalid data
9 which can be identified and ignored by a downstream process.

1   10.   (Previously presented)   The method of claim 9, wherein adapting
2 said rate comprises lowering said initial rate according to predefined percentages of
3 said initial rate in response to said error condition.

1   11.   (Previously presented)   The method of claim 10, further comprising
2 notifying a network operator in the event of said error condition.

1   12.-13. (Cancelled)